

Overview

The Symposium, sponsored by ASTM Committee D-19 on Water, was co-chaired by John M. Bates, Sally D. Dennis, and Billy G. Isom. Papers are presented which develop rational bases for sampling various aquatic ecosystems and for assessing environmental hazard from the generated data. The first two papers deal with the importance of geographic, climatic, land surface forms, soils, land uses, river basins, and vegetation as factors in establishing reference sites on which to evaluate changes in the ecological integrity. Further, proven capabilities in sampling the water, sediment, and biota for the necessary physical, chemical, biological, and toxicological properties measurements should be demonstrated for credible useful and consistent results. All aspects of the program must be subjected to exacting quality assurance and control practices on sample collection, storage, and analyses. The next two papers deal with the special problems which arise when attempting to assess the impact on a specific organism from an environmental or ecological change and determine the source of that change. Other papers stress the necessity to consider not only the sampling and data gathering and the quality of the data but also the objective of the program, the limitations to the uses of the information, and the impact on the decisions that must be made. All the information contained herein should be valuable for those considering a program of sampling and analyzing an aquatic ecosystem for the assessment of the impact of ecological change and hazard. We sincerely appreciate the efforts of all the authors and the opportunity to present concepts which may improve future studies resulting in better scientific bases for decisions which affect us all.

Charles Eugene Hamilton

Chairman, Committee
D-19 on Water